

## REMARKS

Support for the amendment to claim 1 can be found, for example, on page 4, lines 3-7 of the specification. See also, *In re Johnson*, 558 F.2d 1008, 1019, 194 USPQ 187, 196 (CCPA 1977). No new matter has been added.

### Rejections under 35 USC §103

Claims 1-14 stand rejected under 35 U.S.C. 103 as being unpatentable over Hayashida et al. (US. 5,290,361) in view of Smith et al. (US. 2005/0042198) in evidence of Kakizawa et al. (US. 6,514,921).

Hayashida et al. teaches a cleaning solution for semiconductor surface treatment comprising an alkaline compound such as ammonium hydroxide, hydrogen peroxide, water, chelating additive and a complexing agent **having one or more phosphorus containing groups** or salts thereof. See, col.4, lines 19-24 and the claims of Hyashida.

Thus, Hayashida is silent regarding a cleaning solution that is free of phosphorus containing compounds. Furthermore, there is no suggestion within Hyashida which would teach a skilled worker to remove its essential component (i.e., phosphorus containing agent).

In addition, as the Examiner correctly notes on page 3 of the Office Action, Hayashida et al. (US 5,290,361) does not teach a cleaning solution comprising 2,2-Bis(hydroxyethyl)-(iminotris)-(hydroxymethyl)methane. For this the Examiner relies upon Smith et al (US 2005/0042198 A1), alleging that a skilled worker would be motivated to combine Hayashida et al. and Smith et al. However, Smith is non-analogous art and a skilled worker would not look to the ophthalmologic arts to solve a problem in cleaning semiconductor substrates without some specific reason related to a problem to be solved. Ophthalmology is a vastly different field of endeavor from semiconductor substrates. The role of hydrogen peroxide in a physiological eye solution is very different from the role of hydrogen peroxide in a solution for removing and inhibiting metal contamination on the surface of a semiconductor substrate. The amounts used are vastly different. A skilled worker in ophthalmology would recognize that the concentration of hydrogen peroxide in an ophthalmic solution must be physiologically compatible with the

eye and the contact lens. Such a solution must be pH neutral and essentially isotonic or it would jeopardize the compatibility with an eye and damage the contact lens. Smith discloses hydrogen peroxide in anti-microbial concentrations of about 30 to 200 ppm (i.e. up to 0.02 % by weight). The ophthalmic and contact lens wetting solution of Smith is simply not useful for cleaning semiconductor substrates. In contrast to Smith's ophthalmic solution, the solution according to the present invention is alkaline and free of any contamination by foreign anions to avoid decomposition of hydrogen peroxide and to avoid contamination of the semiconductor substrate, particularly by cations such as sodium and transition metals. An electrolyte like sodium chloride (such as in Smith) would contaminate the semiconductor substrate and create dangers in further processing, and would therefore not be accepted by a semiconductor manufacturer. Thus, a skilled worker would not find the ophthalmic solutions taught by Smith to be analogous art.

Kakizawa et al. (US. 6,514,921) is relied upon for its teachings regarding use of a buffer in a semiconductor cleaning solution. At col. 5 lines 10-15 of Kakizawa states:

"In addition to the constitutional ingredients as mentioned above, various auxiliary ingredients such as surfactants, buffers and organic solvents may be contained in the cleaning agent of the present invention within the range which does not inhibit the cleaning efficiency according to the present invention."

Kakizawa provides a general teaching that various broad classes of auxiliary ingredients may be added to a cleaning solution. No specific buffers are taught. Like, Hayashida et al. above, Kakizawa is silent regarding 2,2-Bis(hydroxyethyl)(iminotris)-(hydroxymethyl)methane [Bis-Tris]. A skilled worker looking to choose a specific buffer for a semiconductor cleaning solution would find no guidance within Kakizawa, nor would they look to non-analogous medical eye arts for guidance. The solutions of Kakizawa and Hayashida would never be used as an ophthalmic solution which must be physiologically compatible with the eye and the contact lens. Likewise, the solutions taught by Smith would never be used to clean a semiconductor substrate that must be free of contamination from metals like sodium.

Clearly, appellants' disclosure is impermissibly being used as a template to assert obviousness. See *In re Fritch* 972 F.2d 1260, 23 USPQ2d 1780 (Fed. Cir. 1992) where the court stated:

"It is impermissible to use the claimed invention as an instruction manual or 'template' to piece together the teachings of the prior art so that the claimed invention is rendered obvious." This court has previously stated that "[o]ne cannot use hindsight reconstruction to pick and choose among isolated disclosures in the prior art to deprecate the claimed invention"

Thus, based on the above comments it is respectfully requested that the rejection under 35 USC §103 be withdrawn.

The Commissioner is hereby authorized to charge any fees associated with this response or credit any overpayment to Deposit Account No. 13-3402.

Respectfully submitted,  
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